Abstract

The present invention relates generally to catheters for performing medical procedures including percutaneous transluminal coronary angioplasty. More particularly, the present invention relates to guide catheters, diagnostic catheters and balloon catheters with an improved shaft design. In a preferred embodiment, the present invention includes a catheter shaft comprising an elongate support member having an outer surface, the elongate support member preferably defining a lubricious liner; a first layer disposed over the lubricious liner, a second layer disposed over the first layer, a third layer disposed over the second layer, a fourth layer disposed over the third layer, and a fifth layer disposed over the fourth layer. In preferred embodiments, the first and third layers comprise an ultraviolet-curable epoxy which is cured to desired degrees at select axial locations on the shaft to provide desired stiffness.